LIBRARY
STATE PLANT BOARD

United States Department of Agriculture
Agricultural Research Administration
Bureau of Entomology and Plant Quarantine

MICROSCOPE LAMP

By Francis Munger,
Division of Fruit Insect Investigations

Shortages of critical materials have limited the supply of factory-made laboratory equipment. A lamp constructed largely from materials already on hand in the laboratory is here described for the information of other workers who may be faced with a similar need. The lamp assembly consists of a wooden stand made to support a box holding a straight-sided glass jug containing distilled water. The electric-light bulb is so placed that the light shines through the jug, producing a working light that is bright, diffused, and cold.

The following materials are required:

(1) 150-watt, 110-volt, "reflector-spot" bulb[1/] with socket.
(2) Rectangular glass jug, 1-gallon capacity.
(3) Two carriage bolts, 1/4 by 2 inches, with wing nuts and several screws; strip metal and small bolts for the socket clamp.
(4) Lumber as needed for base, uprights, and box:
One wooden base, 6 by 9 1/4 by 3/4 inches.
Two wooden uprights, 3 1/2 by 18 by 3/4 inches.
Other lumber for construction of box.

The assembly of the parts is shown in figure 1.

The stand is made by fastening the two uprights to the top side of the base, with long screws. The uprights are slotted to accommodate bolts which hold the box for the glass jug. The bolts and the slots make it possible to adjust the elevation and angle of the light. The bottom and two sides of the box are made of 1/2-inch wood. One side is left open, and the side opposite is covered with a piece of 1/4-inch plywood. A hole 5 inches in diameter is cut in the plywood to allow the light to shine through. Two strips of metal are attached to the box to hold a clamp for the light socket.

A smaller field of light can be obtained by inserting a cardboard shield with a smaller hole between the jug and the plywood. If a blue tint in the light is desired, some copper sulfate can be dissolved in the water.

1/ There are at least two brands of these bulbs on the market. Its essential feature is a built-in parabolic reflector, which produces an intense beam of light.

UNIVERSITY OF FLORIDA
3 1262 09240 8847

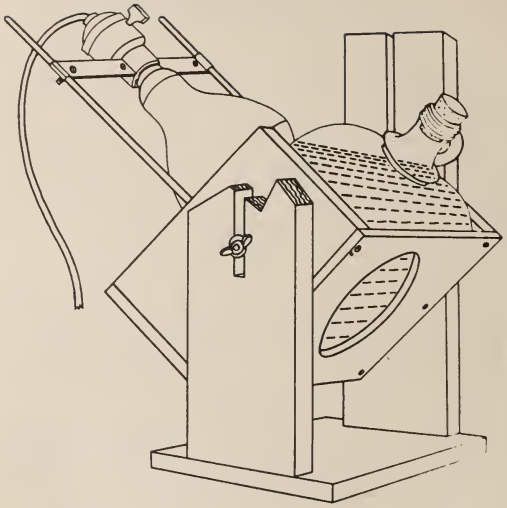

Figure 1.—Microscope lamp assembly. (Drawing made by F. S. Stickney.) The upright on the left has been cut down to show details.